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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,723	07/20/2005	Michael Menth	2003P00697WOUS	8414

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SIEMENS CORPORATION
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EXAMINER	
CHAN, SAI MING	
ART UNIT	**PAPER NUMBER**
2462	
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11/03/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/542,723	MENTH ET AL.	
	Examiner	Art Unit	
	SAI-MING CHAN	2462	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *7/23/2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 11-19, 21, 24-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Meempat et al. (U.S. Patent #6904017),** in view of **Ben-Ami (U.S. Patent Publication #20020027885).**

Consider **claim 11**, Meempat et al. clearly show (previously presented) a method for setting limit values of an access control for limiting traffic transmission in a communication network, wherein the communication network comprises a plurality of pairs of marginal nodes between which the transmission occurs (col. 6, lines 57-60 (pairs of edge router)), and the limit values of the access control are limit values regarding the pairs (col. 7, lines 19-28 (load balancing)), the method comprising the following steps:

setting the limit values (col. 3, lines 24-29) such that probabilities for each of the pairs related to not approving the transmission between the marginal nodes of the pair, without explicit path reservation (fig. 9, col. 12, lines 58-62 (stores a probability of each available paths between a given pair of routers)), are substantially the same (col. 7, lines 19-28 (load balancing), col. 8, lines 35-44 (call admission control and load balance for every pair of edge nodes)), and such that an overload situation in the communication network does not occur (col. 7, lines 19-28 (load balancing));

However, Meempat et al. do not specifically disclose increasing the limit value.

In the same field of endeavor, Ben-Ami et al. clearly show:

increasing the limit values to a minimum value (paragraph 0012) at which an overload situation starts to occur (paragraph 0151 (some traffic unsatisfied)), such that

the probabilities are substantially the same (fig. 6 (non-blocking), paragraph 0005 (blocking factor =0)); and

updating the limit value regarding at least one of the pairs of marginal nodes (expanding capacity of an edge), between which a transmission occurs causing the overload situation, by setting the limit value to the minimum value (paragraph 0159 (capacities of the edges sum up to no more than the capacity of the switch); Examiner notes that an edge is a link that connects nodes).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to demonstrate a method of setting limit values, as taught by Meempat et al., and show increasing the limit value, as taught by Ben-Ami, so that edge nodes will not be overloaded.

Consider **claim 26**, Meempat et al. clearly discloses and shows a method for setting limit values of an access control for limiting traffic transmission in a packet-switched communication network (col. 1, lines 29-32 (packet switching)) comprising a plurality of marginal nodes (col. 6, lines 57-60 (pairs of edge nodes)) and a plurality of internal nodes (col. 3, lines 49-52 (interconnecting routers)), the method comprising:

identifying all pairs of marginal nodes in the network (col. 4, lines 62-65 (each pair of edge nodes)), wherein each pair of marginal nodes is identified as an origination and destination node of a given transmission in a given direction within the network (col. 4, lines 62-65 (each pair of edge nodes)), and not an intermediate internal node in the

given transmission (col. 4, lines 62-65 (each pair of edge nodes));

using a traffic model (col. 5, lines 17-18 (call model)) to set a traffic threshold value for each pair of marginal nodes (col. 5, lines 17-18 (call model)) without explicit path reservation (fig. 9, col. 12, lines 58-62 (stores a probability of each available paths between a given pair of routers)) so that blocking probabilities are substantially the same for each pair of marginal nodes (col. 7, lines 19-28 (load balancing));

operating the network with communications traffic (abstract (packet traffic across the network));

However, Meempat et al. do not specifically disclose increasing the threshold value.

In the same field of endeavor, Ben-Ami et al. clearly show:

increasing the threshold values of all pairs of marginal nodes step-by-step until congestion occurs on at least one pair of marginal nodes (paragraph 0012 (increasing capacity of plurality of communication edges), paragraph 0374 (monitor for utilization beyond threshold));

reducing the threshold value on the at least one pair of marginal nodes to the threshold value at the step before the congestion occurred (paragraph 0159 (capacities of the edges sum up to no more than the capacity of the switch)); and

repeating from the increasing step on the remaining pairs of marginal nodes until each of the pairs of marginal nodes has reached a respective congestion and then its threshold value has been reduced to the step before the respective congestion occurred (paragraph 0159 (capacities of the edges sum up to no more than the capacity of the

switch));

whereby traffic throughput of all marginal pairs of the network is optimized (paragraph 0159 (capacities of the edges sum up to no more than the capacity of the switch)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to demonstrate a method of setting limit values, as taught by Meempat et al., and show the threshold value, as taught by Ben-Ami, so that edge nodes will not be overloaded.

Consider **claim 28**, it is being rejected for the same reasons as set forth in claim 11 and 26.

Consider **claim 12**, and **as applied to claim 11 above**, Meempat et al. clearly disclose the method as described.

However, Meempat et al. do not specifically disclose the approving probability and blocking probability.

In the same field of endeavor, Ben-Ami et al. clearly show the probabilities related to not approving the transmission between the marginal nodes of the pairs are blocking probabilities related to blocking the transmission between the marginal nodes of the pairs (fig. 6 (non-blocking), paragraph 0005 (blocking factor =0)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to demonstrate a method of setting limit values, as taught by Meempat et al., and show the approving probability and blocking probability, as taught by Ben-Ami, so that edge nodes will not be overloaded.

Consider **claim 13**, and **as applied to claim 11 above**, Meempat et al. clearly disclose the marginal nodes include nodes of the network representing sources or sinks of traffic of the network (col. 4, lines 62-65 (source node)).

Consider **claim 14**, and **as applied to claim 11 above**, Meempat et al. clearly disclose a method, wherein the marginal nodes are specified by ingress nodes and egress nodes of the network (col. 4, lines 62-65 (source and destination edge nodes)).

Consider **claim 15**, and **as applied to claim 14 above**, Meempat et al. clearly disclose a method wherein the plurality of the pairs comprises all pairs of the network consisting of an ingress node and an egress node in each case (col. 4, lines 62-65 (source and destination edge nodes)).

Consider **claim 16,** and **as applied to claim 11 above**, Meempat et al. clearly disclose the method as described.

However, Meempat et al. do not specifically disclose overload situation.

In the same field of endeavor, Ben-Ami et al. clearly show the overload situation is produced when in a scenario of high traffic load, in which the limit values for the access controls are still adhered to (paragraph 0159 (capacities of the edges sum up to no more than the capacity of the switch)), a threshold value is exceeded on a link for the traffic transmitted over the link (paragraph 0177 (non-uniform distribution of traffic/utilize switch to its fullest capacity), paragraph 0374 (congested or utilized beyond predetermined threshold)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to demonstrate a method of setting limit values, as taught by Meempat et al., and show overload situation, as taught by Ben-Ami, so that edge nodes will not be overloaded.

Consider **claim 17**, and **as applied to claim 16 above**,

claim 21, and **as applied to claim 20 above**,

Meempat et al. clearly disclose a method, wherein the threshold value for the traffic transmitted over the link is assigned to the link such that in case of failure of the link, the traffic allowed within the framework of the access controls does not represent any overload (col. 9, lines 63-66 (threshold indicates new calls should not be accepted)).

Consider **claim 18**, and **as applied to claim 11 above**, Meempat et al. clearly disclose the method as described.

However, Meempat et al. do not specifically disclose increasing the limit value.

In the same field of endeavor, Ben-Ami et al. clearly show increasing the limit values regarding further pairs of the pairs, which for the limit value is not determined yet, in excess of the minimum value to a further minimum value at which a further overload situation starts to occur (paragraph 0012 (increasing capacity of plurality of communication edges), paragraph 0374 (monitor for utilization beyond threshold)); and

updating the limit value regarding at least one of the further pairs of marginal nodes, between which a transmission occurs causing the further overload situation, by setting the limit value to the further minimum value (paragraph 0012 (increasing capacity of plurality of communication edges), paragraph 0374 (monitor for utilization beyond threshold)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to demonstrate a method of setting limit values, as taught by Meempat et al., and show increasing the limit value, as taught by Ben-Ami, so that edge nodes will not be overloaded.

Consider **claim 19**, and **as applied to claim 18 above**, Meempat et al. clearly disclose the method as described.

However, Meempat et al. do not specifically disclose repeating the limit value.

In the same field of endeavor, Ben-Ami et al. clearly show repeating the further steps until the limit values for all of the pairs are determined (paragraph 0012 (increasing capacity of plurality of communication edges), paragraph 0374 (monitor for utilization beyond threshold)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to demonstrate a method of setting limit values, as taught by Meempat et al., and show repeating the limit value, as taught by Ben-Ami, so that edge nodes will not be overloaded.

Consider **claim 24**, and **as applied to claim 11 above**, Meempat et al. clearly disclose and show a network node with means for executing the method (col. 11, lines 24-28 (execute a sequence of steps)).

Consider **claim 25**, and **as applied to claim 24 above**, Meempat et al. clearly discloses and shows a network node wherein the network node is a marginal node of the network (col. 6, lines 57-60 (pairs of edge router)).

Consider **claim 27**, and **as applied to claim 26 above**, Meempat et al. clearly discloses and shows a method, wherein each pair of marginal nodes is defined as an ingress node and an egress node, or an ingress node into the network and an addressee node of the given transmission within the network, or a transmitter node of

the given transmission within the network and an egress node from the network, regardless of traffic path and internal nodes for routing the given transmission between the pair of marginal nodes (col. 6, lines 57-60 (pairs of edge router)).

Consider **claim 29**, and **as applied to claim 28 above**, Meempat et al. clearly discloses and shows the method as described.

However, Meempat et al. do not specifically disclose raising the limit value.

In the same field of endeavor, Ben-Ami et al. clearly show:

raising the limit values of all of the remaining non-overloaded nodes, step by step, until a next overload occurs on one or more next pairs of overloaded marginal nodes (paragraph 0012 (increasing capacity of plurality of communication edges), paragraph 0374 (monitor for utilization beyond threshold)); and

reducing the limit value on each of the next overloaded marginal nodes to the limit value at the step prior to the next overload (paragraph 0159 (capacities of the edges sum up to no more than the capacity of the switch)), and not reducing the limit value on the remaining non- overloaded pairs of marginal nodes (paragraph 0159 (capacities of the edges sum up to no more than the capacity of the switch)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to demonstrate a method of setting limit values, as taught by Meempat et al., and show raising the limit value, as taught by Ben-Ami, so that edge nodes will not be overloaded.

Consider **claim 30**, and **as applied to claim 29 above**, Meempat et al. clearly discloses and shows the method as described.

However, Meempat et al. do not specifically disclose repeatedly raising the limit value.

In the same field of endeavor, Ben-Ami et al. clearly show repeatedly raising the steps of this claim 29 in order one or more times (paragraph 0012 (increasing capacity of plurality of communication edges), paragraph 0374 (monitor for utilization beyond threshold)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to demonstrate a method of setting limit values, as taught by Meempat et al., and show repeatedly raising the limit value, as taught by Ben-Ami, so that edge nodes will not be overloaded.

Claims 20, and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Meempat et al. (U.S. Patent #6904017),** in view of **Ben-Ami (U.S. Patent Publication #20020027885),** in view of **Fodor et al. (U.S. Patent #6788646).**

Consider **claim 20**, and **as applied to claim 18 above**, Meempat et al. clearly disclose and show the method as described.

However, Meempat does not specifically disclose the further overload situation is produced when in a further scenario of high traffic load, in which the limit values for the access controls are still adhered to, a further threshold value is exceeded on a further link for the further traffic transmitted over the further link.

In the same field of endeavor, Fodor et al. clearly show the further overload situation is produced when in a further scenario of high traffic load, in which the limit values for the access controls are still adhered to, a further threshold value is exceeded on a further link for the further traffic transmitted over the further link (fig. 2; column 11, lines 19-59 (iterative steps to tune the cut-off parameters to its maximum in order to minimize the blocking probabilities)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to demonstrate a method for setting limit value, as taught by Meempat, and show overload situation is produced when in a further scenario of high traffic load, in which the limit values for the access controls are still adhered to, a further threshold value is exceeded on a further link for the further traffic transmitted over the further link, as taught by Fodor, so that capacity can be optimized.

Consider **claim 22**, and **as applied to claim 11 above**, Meempat et al. clearly disclose and show the method as described.

However, Ben-Ami does not specifically disclose making access checks for all the traffic of a class of service.

In the same field of endeavor, Fodor et al. clearly show making access checks for all the traffic of a class of service (column 5, lines 27-47 (provide the contracted QoS)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to demonstrate a method for setting limit value, as taught by Meempat, and show making access checks for all the traffic of a class of service, as taught by Fodor, so that capacity can be optimized.

Consider **claim 23**, and **as applied to claim 22 above**, Meempat et al. clearly disclose and show the method as described.

However, Ben-Ami does not specifically disclose the access checks relate to an approval or rejection of individual flows.

In the same field of endeavor, Fodor et al. clearly show the access checks relate to an approval or rejection of individual flows (column 1, lines 58-65 (reject new calls to protect in-progress calls in order to provide QoS)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to demonstrate a method for setting limit value, as taught by Meempat, and show the access checks relate to an approval or rejection of individual flows, as taught by Fodor, so that capacity can be optimized.

Response to Arguments

Applicant's arguments filed on 7/23/2009, with respect to claims 11 and 18, on pages 2-10 of the remarks, have been carefully considered.

In the present application, Applicants basically argue, that Meempat does not show "without explicit path reservation". The Examiner respectfully disagrees with the Applicant's arguments, because in Meempat's reference, it does provide a probability for each pair of routers "without explicit path reservation (fig. 9, col. 12, lines 58-62 (stores a probability of each available paths between a given pair of routers))".

Therefore, in view of the above reasons, Examiner maintains rejections.

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Sai-Ming Chan whose telephone number is (571) 270-1769. The Examiner can normally be reached on Monday-Thursday from 8:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

/Sai-Ming Chan/

Examiner, Art Unit 2462

/Donald L Mills/
Primary Examiner, Art Unit 2462